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AUTHOR Heathers, Glen
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ABSTRACT

This unit reviews educational theory and its relationships to educational practice. Its purpose is not to survey various theories of planned educational change since there is an extensive body of literature dealing with this topic. Theory, as presented in this unit, is tied closely to strategies that can guide leaders in planning and conducting local educational change programs. After study of this unit, one should be able to do the following: define theory, distinguishing hypotheses from principles or laws; relate theory to practice; define change strategy and explain how it relates to theory; describe and compare consumer-centered and product-centered change strategies; outline the purposes and procedures of field testing, demonstrating, disseminating, and marketing educational products; compare pilot-test and total-system strategies of local change; compare authoritarian and participatory change strategies; describe the roles of external and internal change specialists; and outline the role of the resource linkage agent in educational change. (Author/IRT)

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TRAINING FOR LEADERSHIP IN LOCAL
EDUCATIONAL IMPROVEMENT PROGRAMS

UNIT 2. THEORY AND STRATEGIES OF PLANNED CHANGE IN EDUCATION

Unit Author

Glen Heathers

Project Director

Glen Heathers

Research for Better Schools
1700 Market Street
Philadelphia, Pennsylvania

Robert G. Scanlon
Executive Director

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PREFACE

This is one of 10 units in a program of Training for Leadership in Local Educational Improvement Programs. Development of the program was begun at the Learning Research and Development Center at the University of Pittsburgh and has been carried forward at Research for Better Schools in Philadelphia.

If you have in hand the Instructor's Guide to the program, or Unit 1 entitled Training Program Introduction and General Study Plan Guide, you will have sufficient introduction to the nature and purposes of the training program. If you do not have access to one or both of these items, the following paragraphs will introduce you to this unit of the program.

This unit was designed for use by anyone holding a position calling for leadership in planning and conducting local educational change programs. This means school district leaders - central office administrators, building principals, curriculum specialists, or teachers involved in change progject teams. Also it means graduate students in curriculum, administration, or supervision. In addition, curriculum specialists or field personnel of state education departments or other educational agencies may find the unit of value in their work with school districts - as in the conduct of workshops involving local school personnel.

The unit can be studied on a wholly self-instructional basis, or with an instructor's direction. It requires about 6 to 10 hours of study time.

This unit offers a general overview of strategies of local educational change based on an examination of change theory. It is meant as an introduction to Units 3-10 of this training program that deal with particular aspects of local educational change.

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UNIT 2. THEORY AND STRATEGIES OF PLANNED CHANGE IN EDUCATION

Introduction

This unit reviews educational theory and its relationships to educational practice. It should help you in selecting methods of applying theory to practical problems in the design and conduct of planned change in education.

Today, despite the great emphasis on research as a means of seeking solutions to problems in education, it still is true that many educators are skeptical about theory and its values for our profession. Generally, our society recognizes that systematic study is essential for solving great problems such as crime, pollution, drug addiction, and inflation. Systematic study, and the theory it involves, also can provide answers to questions in education such as how to motivate children to study, how to plan the instructional program, or how to build sound school-community relations.

Some school personnel look at theorists as people in an ivory tower who are unaware of, or unconcerned about, the practical. They say they want solutions to their problems, not just more theory. Often we hear them say, "That's very nice in theory, but it's not the way things happen in our schools." A probable reason for such statements is that they result from misconceptions about what theory is. This unit seeks to help clear up such misconceptions.

This unit treats theory in a general, and at the same time practical, way. Its purpose is not to survey various theories of planned educational change since there is an extensive body of literature dealing with this topic to which you can turn. Theory as presented in this unit is tied closely to strategies that can guide leaders in planning and conducting local educational change programs.

After study of this unit, you should be able to do the following:

-- Define theory, distinguishing hypotheses from principles or laws

-- Relate theory to practice

-- Define change strategy and explain how it relates to theory

-- Describe and compare consumer-centered and product-centered change strategies

-- Outline the purposes and procedures of field testing, demonstration, dissemination, and marketing educational products

-- Compare pilot-test and total-system strategies of local change

-- Compare authoritarian and participatory change strategies

-- Discuss the roles of external and internal change specialists

-- Outline the role of the resource linkage agent in educational change

It is best that you study this unit before study of any of the remaining units of this training program since it offers a general basis for study of the later units. The theory and strategies covered in this unit are basic to the following units:

Unit 3 that presents a general task flow for designing and conducting local change programs

Units 4-7 that deal with themes of educational change: individualization, enquiry or problem solving, personal/social development, and relevance

Unit 8 that focuses on selecting a local educational change program

Unit 9 that concerns improving the implementation of a local educational program

Unit 10 that deals with spreading the use of an innovative program throughout a school district

Unit Study Plan

Before beginning study of this unit, you should determine how intensively you want or need to study each objective. After a careful diagnosis of your needs and present attainments, if you judge that study of some of the unit objectives is unnecessary, you are free to omit them from your study.

Below is a guide for arriving at your study plan, either with help from your instructor (if you have one) or on your own. The guide calls for a four-step procedure: assess your needs to study the unit objectives, decide how to study them, assess your mastery of the unit objectives after study of the unit, and evaluate the unit.

Personal assessment of needs to study the unit. First, turn the pages of the unit quickly to acquaint yourself with the objectives and their contents. Twenty minutes should be sufficient for skimming the unit.

Next, perform the Pre-Assessment Exercise that follows to obtain a basis for estimating your present level of mastery of the unit objectives. The exercise contains questions giving you the opportunity to review your knowledge as related to the unit objectives. In doing the Pre-Assessment Exercise, use it simply as a way of determining what parts of the unit you need to study. It is not expected that you will pass the Pre-Assessment, though you are apt to find that you can answer some of the questions adequately before studying the unit.

When you have completed the Pre-Assessment Exercise, check your answers against the Pre-Assessment Exercise Answer Key (at the end of the unit). Keep in mind that this exercise is for your use in determining which parts of this unit will require the bulk of your study time.

PRE-ASSESSMENT EXERCISE - UNIT 2

Directions: This pre-assessment has two purposes. It gives you the opportunity to demonstrate mastery of some unit objectives before studying the unit, and it orients you to the unit as preparation for studying it.

Feel no obligation to answer a question. It is not expected that you will necessarily be able to answer any of the questions. However, if you can give a fully adequate answer to a question on this pre-assessment, you have no need to study that part of the unit to which the question refers.

Probably you will need no more than one-half hour to complete this exercise. When you complete it, turn to the Pre-Assessment Exercise - Answer Key at the end of the unit to check your answers. Then turn to the page following this Pre-Assessment Exercise to continue with your unit study plan.

Objective 1. Define theory in terms of variables and relationships among variables.

Objective 2. Define and distinguish hypotheses from principles or laws.

Objective 3. Describe how theory is related to practice in terms of explaining, predicting, and controlling what happens.

Objective 4. Define change strategy and explain how it relates to theory.

Objective 5. Describe and compare consumer-centered and product-centered change strategies.

Objective 6. Describe the following as aspects of introducing changes in schools: field testing, demonstration, information dissemination, and marketing.

Objective 7. Compare pilot-test and total-system strategies for introducing changes in a school district.

Objective 8. Describe authoritarian and participatory change strategies and give key strengths and weaknesses of each.

Objective 9. Describe the roles of external and internal change specialists and give key strengths and weaknesses of each.

Objective 10. Outline the role of the resource linkage agent in educational change.

Having completed the Pre-Assessment Exercise, you (with your instructor, if you have one) should check your answers with those given in the Pre-Assessment Exercise - Answer Key at the end of the unit. Compare the quality and detail of your answers with those offered in the Answer Key. There is no one right answer to any of the questions but rather key points that are required for an adequate answer, with those points stated in your own words. The Answer Key probably contains fuller answers to most of the questions in the exercise than you can give before studying the unit.

In the following table (next page) you are asked to check the estimates you (and your instructor?) make of your level of mastery of each objective. Check HIGH if you judge your answer to be right on target and in adequate detail. Check MODERATE if you believe your answer to be good but lacking some points needed for a fully adequate answer. Check LOW if you find your answer to be inappropriate or incomplete, or if you did not answer the question.

After checking your level of mastery of each objective, check at the right whether the objective requires merely review, or careful study. It is not a sound procedure for you to study the Answer Key as a way of learning answers to items in the Pre-Assessment Exercise. Instead, you should study the unit materials since they are meant to prepare you to give an adequate answer based on an understanding derived from reading and practice exercises.

UNIT STUDY PLAN CHECKSHEET

OBJECTIVE	TOPIC	PRESENT MASTERY H	M	L	REVIEW ONLY	NEED TO STUDY
1.	Define theory in terms of variables and relationships	___	___	___	___	___
2.	Define and distinguish hypotheses and principles or laws	___	___	___	___	___
3.	Demonstrate competence in relating theory to practice using the explain-predict-control formula	___	___	___	___	___
4.	Define change strategy and explain how it relates to theory	___	___	___	___	___
5.	Describe and compare consumer-centered and product-centered change strategies	___	___	___	___	___
6.	Outline the purposes and procedures of field testing, demonstration, information dissemination, and marketing in product-diffusion strategies	___	___	___	___	___
7.	Compare pilot-test and total-system strategies for introducing change in a school district and give advantages and disadvantages of each	___	___	___	___	___
8.	Describe authoritarian and participatory change strategies and give key strengths and weaknesses of each	___	___	___	___	___
9.	Describe and compare the roles of external and internal change specialists and give key strengths and weaknesses of each	___	___	___	___	___
10.	Outline the role of the resource linkage agent in educational change	___	___	___	___	___

Study procedure. In studying the unit, you will gain by doing the objectives in the order in which they appear since each part of the unit assumes a level of understanding based on the previous parts. It is a good idea to at least skim those parts of the unit that you judge, on the basis of the Pre-Assessment Exercise, that you already have mastered.

You may wish to study all or part of the unit with one or more fellow students. Your instructor may elect to conduct group sessions either to introduce the unit, to review it after your study, or to add further material. And, or course, you could study the unit entirely independently.

You will note that, under each objective, explanatory material is given that is usually supported by illustrations and most often is involved in exercises you perform. The exercises are either followed immediately by explanatory materials to help you check and round out your answers, or they are provided with an Answer Key.

You probably will take about one day to study this unit, depending on how intensively you need or want to study any or all of its objectives. It is best to go through the unit in its entirety first, then make plans for later and more intensive study of any areas of particular interest to you.

Post-assessment. When you complete study of the unit, you will find directions for the Post-Assessment Exercise. Perform the Exercise and check your answers against those given in the Answer Key. If you fail to show mastery of any objectives at this time, further study is indicated.

Unit evaluation. At the end of the unit you will find a Unit Evaluation Form. It will be helpful if you take a few minutes to complete it and return it to the address given. This will be an aid in making any revisions of the unit and in learning who can benefit from study of it.

GENERAL REFERENCES

The literature on planned change in general or in education is very extensive. The following is a brief list of key references that may prove useful to you.

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Objective 1. Define theory in terms of variables and relationships.

Theory is made up of statements of "cause-and-effect" that identify hypothetical or proven relationships between or among variables. As an example, consider the following statement:

The larger a stone, the more work is required to lift it.

This statement expresses a relationship of "cause-and-effect" between the variables of largeness (size) and work (weight). This is an established relationship that is accepted to be universally true, provided that the material making up a stone is similar in all of the stones tested.

Largeness and work are called variables because they are factors in the situation that can vary in degree along one or more dimensions. A stone of any given material can vary in size from small to large as measured by a ruler or by the amount of water it displaces. Work also can vary in amount from little to much as measured, for example, by a balance-beam scale or by the amount of electric current used.

In the example, we call size the causal variable and work the effect variable. (A more sophisticated terminology labels size the independent variable since this is the variable whose effect is to be measured, and work the dependent variable since the amount of work required is dependent on variations in the size of the stones tested.)

The example given expresses a positive relationship between the two variables; the more size, the more work. Some theoretical statements express negative relationships: the more this, the less that. For example, the more carbon dioxide there is in the air, the lower (less) a flame will burn.

While the heart of theory consists of statements of relationship between or among variables, two other uses of the word theory need to be understood. One is its use in the expression a theory or the so-and-so theory. In this case, the word theory refers to an organized system of statements about the relationships among a set of variables. Thus we talk about learning theory or personality theory or political theory. Or, more particularly, we talk of Freudian theory or Marxian theory. The other use of the word theory seeks to distinguish it from fact. This use is illustrated by the remark one frequently hears, "That's true in theory, but not in fact." This is an erroneous use of the word theory since it implies that theory always is contrary to fact. Nothing could be more contrary to fact than such remarks since theory very often corresponds to fact.

Exercise 1 that follows gives you practice in identifying causal and effect variables, and in indicating the direction of relationship, in each of four statements. When you complete the Worksheet, turn to the Answer Key on the next page to check your answers.

EXERCISE 1 - WORKSHEET

Directions: Examine the following statements and for each write in the causal variable, the effect variable, and the direction of the relationship between the two. When you have completed the worksheet, check your answers by turning to the Answer Key on the following page.

STATEMENT OF RELATIONSHIP	CAUSAL VARIABLE	EFFECT VARIABLE	CIRCLE DIRECTION OF RELATIONSHIP
The more oxygen in a room, the brighter a candle will burn			+ -
The more weight a horse carries, the slower he runs			+ -
The more a student fails, the lower his self-concept			+ -
The more instruction is individualized, the more students learn			+ -

EXERCISE 1 - ANSWER KEY

Explanation: The following are the expected answers in this exercise. The particular words chosen in naming the causal and effect variables can vary, provided that you identify the correct variables.

STATEMENT OF RELATIONSHIP	CAUSAL VARIABLE	EFFECT VARIABLE	CIRCLE DIRECTION OF RELATIONSHIP
The more oxygen in a room, the brighter a candle will burn	oxygen	brightness	(+) -
The more weight a horse carries, the slower he runs	weight	speed	+ (-)
The more a student fails, the lower his self-concept	failure	self-concept	+ (-)
The more instruction is individualized, the more students learn	individualization	learning	(+) -

Objective 2. Define and distinguish hypotheses and principles or laws.

Statements in theory vary from those lacking any supporting evidence to those that are firmly established by massive evidence. Statements toward the "no evidence" end of the continuum are called hypotheses while those toward the "ample evidence" end are called principles or, sometimes, rules or laws.

Any theoretical statement, whether hypothesis or principle, is a generalization since it asserts that the relationship spoken of is generally true. Usage of the term "generalization" is inconsistent since many people use it as synonymous with principle or law while others use it to refer to any statement on the relationship between variables, whether hypothesis or principle. The latter usage is the correct one.

An hypothesis assumes a relationship to be true and in that respect is a guess. However, it should not be a random guess but an educated one in the sense that there is some rational basis for expecting the relationship to be true. Suppose, for example, a researcher wishes to determine ways of improving intergroup attitudes. He may hypothesize that, if members of two groups holding hostile attitudes toward each other view a film showing similar groups relating in a friendly fashion, the attitudes of the viewers toward members of the other group will become more positive. The assumption is that the viewers will somehow identify with the filmed presentation and, through identifying, will adopt changed attitudes. The hypothesis, therefore, is a reasonable one. However, it will remain a hypothesis until evidence on it is obtained through testing.

During the past quarter century, many research studies on intergroup attitudes and relations have been conducted and there is a considerable body of hypotheses in this field that have been tested and become established principles. Thus, it has been found that, if hostile groups can be induced to

work together or play together productively, their general relationships will usually be improved. Also, it has been found that attitudes toward an "outgroup" tend to become more favorable if a prestigeful "ingroup" member expresses friendliness toward members of the other group.

Most principles, including those related to human behavior, are far from universally true. They usually refer to tendencies that are strong enough to be useful in predicting on a percentage basis. Principles enable one to improve on chance, and that is valuable if there is no other basis for predicting (or controlling) events. Sometimes principles involve powerful causal factors that make predictions almost certain. This, however, is rare in predicting the effects of causal variables on human behavior.

Two important reasons for the failure of a principle to offer a basis for correctly predicting outcomes require attention. One reason is that many outcomes require the simultaneous action of two or more variables. Consider the maxim, <u>you can lead a horse to water but you can't make him drink</u>. Put in other words, being in the presence of water isn't enough to ensure that a horse will drink. Another vital causal variable is being thirsty. Multiple causation also is true of human behavior; rarely is control of one variable sufficient to ensure any given outcome.

The second reason for the failure of a principle to hold up in a particular instance is that <u>contingent variables</u> may have entered the situation to block the expected outcome. Thus, a thirsty horse at the stream may still fail to drink if there is a wolf eyeing him from the opposite bank. In education, contingent variables are always operating. A child's learning may be blocked by a multitude of variables that interfere with the operation of sound principles of learning. Poor eyesight, a toothache, thoughts of a baseball game coming up, or fear of failing and of being criticized all may

work against a child's applying himself to a task.

Many principles, including principles in education, have been derived from a wealth of human experience and are well accepted even though they never have been formally tested in a research study. Take, for example, crossing a street. The rule we follow, and teach children to follow, is to look to the right and the left before starting to cross and to cross only if no cars are coming either way that are near enough to hit us. The principle basic to the rule is that a failure to look before crossing increases one's chances of being hit. Actually, this rule is continually tested by the fact that a percentage of those who fail to follow it are struck by cars that cannot stop in time.

Many maxims or sayings are principles of cause-and-effect derived from general human experience. Here are three:

A fool and his money are soon parted.

A soft answer turneth away wrath.

A burnt child fears the flame.

Each of these expresses a relationship that holds true well above chance and properly is considered to be a principle of human behavior.

Distinguishing hypotheses from principles is a complex task since one needs to know whether the statement of relationship has been tested and what the evidence says. Also, one needs to know how conclusive the test of the relationship has been in cases where evidence of a definite relationship has been found. Consider, for example, the hypothesis that cigarette smoking tends to produce lung cancer. Years of research were required to produce the prevailing expert opinion that such a relationship exists, that is, to convert the hypothesis into a principle. And there still are skeptics who claim that it is not the cigarette smoking that actually causes cancer but rather that cigarette smokers tend to live in places with high concentration of cancer-producing substances, or that cigarette smoking and cancer proneness both are

caused by a third, unidentified factor.

Exercise 2 gives you practice in distinguishing hypotheses from principles or laws. With each example, you are asked to give your judgment as to whether the relationship has been established by research or everyday experience, or whether it is simply a reasonable probability that has not been established by evidence.

EXERCISE 2 - WORKSHEET

Directions: For each of the following statements, give your judgment (by checking) as to whether it is a principle established by adequate evidence or an hypothesis that requires testing to determine whether or not it generally is true. Check your judgments against the Answer Key that gives another person's judgments that are not necessarily the right answers.

---

1. The more similar teacher and student backgrounds are, the better students learn.

   Hypothesis_____ Principle_____

2. What is learned in one situation transfers to other situations in direct proportion to similarities in the two situations.

   Hypothesis_____ Principle_____

3. The earlier in life a child is taught to read the better the child will read in later years.

   Hypothesis_____ Principle_____

4. When white and black children attend school together, racial prejudice becomes less.

   Hypothesis_____ Principle_____

5. A person's self-concept becomes more positive as the result of success, or approval by others.

   Hypothesis_____ Principle_____

EXERCISE 2 - ANSWER KEY

Explanation: The answers given below are not offered as the correct ones but merely to help you clarify your understanding of the distinction between hypotheses and principles. The test is whether adequate evidence for a statement is present to make it a principle rather than an hypothesis.

---

1. The more similar teacher and student backgrounds are, the better students learn.

   Hypothesis ✓ Principle ____

   This is a reasonable statement but it hasn't been sufficiently tested. It is reasonable that studies would find that many students learn better under teachers who have different backgrounds.

2. What is learned in one situation transfers to other situations in direct proportion to similarities in the two situations.

   Hypothesis ____ Principle ✓

   Research on learning generally has found this statement to be true.

3. The earlier in life a child is taught to read the better the child will read in later years.

   Hypothesis ✓ Principle ____

   This sounds reasonable but research findings are contradictory. It remains an hypothesis until further research is done.

4. Whan white and black children attend school together, racial prejudice becomes less.

   Hypothesis ✓ Principle ____

   The evidence obtained so far is that merely attending school together usually does not improve racial attitudes. It is what black and white students experience in an integrated setting that determines effects on racial attitudes.

5. A person's self-concept becomes more positive as the result of success, or approval by others.

   Hypothesis ____ Principle ✓

   Both the evidence of everyday experience and research findings generally support this statement as true.

Objective 3. Demonstrate competence in relating theory to practice using the explain-predict-control formula.

All technologies depend on applications of knowledge of cause-effect relationships. This is true of engineering, of medicine, of farming, and of education. Theory, in the form of principles stating cause-effect relationships, thus is the essential basis for practice in any area of endeavor.

The relationship between theory and practice can be made clear by study of the explain-predict-control formula. Principles enable one to explain phenomena since they identify causal variables that influence outcomes (effects).

Example of explanation: These children are studying harder than before because the teacher has been praising their work.

If one knows principles specifying causal factors tending to produce certain effects, and if one knows that those causal factors are in operation, one can predict that those effects will tend to occur.

Example of prediction: This teacher has begun praising her students' work; I predict her students will study harder than before.

Also, if one knows causal factors that will tend to produce certain desired effects, and if one gains control of those causal factors and puts them into operation, he can control the desired outcomes.

Example of control: I am going to praise my students' work as a way of inducing them to study harder.

Knowing that praise has good effects on students' performance, and being able to employ praise, both are required to achieve the desired outcome of getting students to work harder. Knowledge is power, the saying goes. It would be more correct to say that knowledge is power when one puts it to work (applies it) in achieving practical ends.

In relating theory to practice in education, you should start by identifying the outcomes (effects) you wish to achieve (or improve). For example, suppose you are called in by an assistant superintendent of a school district to help plan a system-wide strategy for improving students' self-concepts. A study of the research literature in education would reveal to you a number of principles identifying factors contributing to a positive self-concept. A survey of recent educational innovations would reveal to you a number of practices that apply some of these principles in school programs. You would then be in a position to advise the school district on the changes it might introduce with the purpose of improving students' self-concepts.

At this point, you might be called upon to employ your knowledge of theory and practice in relation to the process of bringing about the program changes the school system elected to introduce. What principles of change theory would be applicable to the choice of a strategy the school system could use in introducing the desired changes? Change theory has a vast literature and there is no one theoretical formulation of the change process that is generally accepted by students of the process. The following statements, put in the form of hypotheses or principles, identify causal variables that many change theorists consider important in achieving effective change programs.

a. User-initiated change programs tend to be more effective than those initiated by outsiders.

b. Change programs tend to be more effective if they originate from identified needs for change.

c. Change programs that have strong community support tend to be more effective than those lacking such support.

d. Change programs tend to be more effective when representatives of the administration, teachers, parents, and students all play a role in designing and conducting the programs.

e. Change programs tend to be more effective when specific plans are made for implementing them.

f. Feedback data on the implementation of change program features tend to improve the program's effectiveness.

g. Change programs are more effective if the participants in a program hold values consistent with those represented in the program.

Putting these hypotheses or principles to work in the design and conduct of a change program requires that you seek to bring any of these (assumed) causal variables into operation through whatever role you hold in influencing the school system. If, for example, community support is chosen as a causal variable to bring under control, an aspect of planning the change program would be to survey community attitudes toward the proposed changes and, if necessary, to set about to build the desired level of support for the changes contemplated.

Objective 4. Define change strategy and explain how it relates to theory.

Change strategy consists of any general approach or plan of action for accomplishing desired changes. In setting about to make any sort of change, various courses of action could be followed. The choice of a particular course of action should be based on a careful consideration of alternatives. The strategy chosen should suit the goals underlying the change effort, should make effective use of the best available resources, and should be consistent with established theory and tested practice.

The term change strategy is applicable only when there is careful, systematic planning in an orderly sequence of goal setting, program design, and program implementation. Analysis of the needs for change and a search for alternative solutions are essential parts of a change strategy. Also factors in the local situation that would favor or oppose different courses of action should be identified and evaluated in strategic planning.

There is no accepted classification of major categories of change strategy. A difficulty in arriving at any such classification is that the strategy adopted for any particular change program is apt to combine features drawn from two or more general types of strategy. However, it is useful to identify a number of types of strategy, as listed below. These types will be examined in some detail under Objectives 5 - 10.

1. Consumer-centered strategies (based on identified local needs for change)
2. Product-centered strategies (focused on spreading the use of products)
3. Authoritarian strategies (requiring compliance to power)
4. Participatory strategies (with all categories of participants sharing in decision-making and in conducting the change program)

5. Product-diffusion strategies (involving field-testing, demonstrations, information networks, and adoption networks)

6. Pilot-test strategies (introducing an innovative program within a district on a limited basis)

7. Total-system strategies (involving an initial system-wide adoption of an innovative program)

8. Linkage-agent strategies (involving an information agency or agent that makes knowledge or know-how available to a school district when requested)

Effective change strategies are based on established principles of change theory. One formulation of such principles is a set of six guidelines for creating a strategy for a change program prepared by the National Training Laboratories (NTL). Each of the six offers a criterion to be satisfied in the design of a change strategy. The illustration given indicates how each guideline might be taken into account in determining the strategy used in setting up and conducting a change program that introduces a nongraded/team teaching plan in the elementary schools of a school system. The illustration assumes that the elementary schools in the system each sets up teams containing about 100 students served by the same team of teachers and that students are taught on a non-grade-level basis that allows them to advance in a subject at whatever rate they can master the material in the curriculum for that subject.

NTL guideline	Application of guideline
1. To change a subsystem or any part of a subsystem, relevant aspects of the environment must also be changed.	Introducing team teaching with nongrading calls for shifting from the one-teacher-per-classroom pattern and for breaking from the grade-level curriculum where all students in the same grade study the same materials.
2. To change behavior on any level of a hierarchical organization, it is necessary to make complementary and reinforcing changes in organizational levels above and below that level.	Since teachers represent the lowest level of the school system hierarchy, introducing the new plan requires changes in the roles of building principles and central office staff, particularly curriculum supervisors and specialists at the district level.

NTL guideline	Application of guideline
3. The place to begin change is at those points in the system where some stress and strain exists.	Introducing team teaching with nongrading at the elementary school level assumes that there is dissatisfaction at this level that the new plan promises to resolve.
4. If thorough-going changes in a hierarchical structure are desirable or necessary, change should ordinarily start with the policy-making body.	Very often, the impetus for change starts with teachers, principals, or curriculum coordinators. This guideline says that, if the team teaching-nongrading plan is to be used on a system-wide basis, the central administration needs to be involved early.
5. Both the formal and informal organization of an institution must be considered in planning any process of change.	Any school system has both a formal organizational structure and an informal system of relations among staff members (such as what occurs in the teachers' room). Before deciding on the team teaching - nongrading plan, views of teachers and other staff members should be sought on an informal basis to determine how they would view the change in terms of their interests.
6. The effectiveness of planned change is often directly related to the degree to which members at all levels of an instructional hierarchy take part in the fact-finding and the diagnosing of needed changes and in formulating and reality-testing goals and programs of change.	This guideline says that any plan to introduce team teaching with nongrading should be worked out by planning teams that represent central administrators, building principals, curriculum coordinators, and teachers. Also, it makes sense to involve parents and community representatives in the process since they can make a contribution to determining what is needed and to making whatever plan is chosen work.

Objective 5. Describe and compare consumer-centered and product-centered change strategies.

A consumer-centered change strategy begins with the identification of local needs for change and then proceeds through the steps in the problem-solving process that are required to fill those needs. Included in the problem-solving process is the identification, analysis, and evaluation of educational products (including procedures and programs) that could meet the needs in question.

A product-centered change strategy begins with a concern for fostering the widespread use of particular educational products (procedures, programs). It is a case of a solution looking for a problem rather than a problem looking for a solution, as is true of the consumer-centered approach.

Determining whether the strategy of a local change program is consumer-centered or product-centered usually is simply a matter of finding out whether the initial impetus for the program came from someone identifying a local need or someone promoting the use of a product. In both cases, the "someone" could either have been inside the school system or outside it. Also, the someone could have been one person or a group of persons.

The product-centered approach most often reflects the efforts of some outside agency to promote the use of a product with which it is identified. A publisher, manufacturer, or marketer of educational products employs, or supports the use of, product-centered strategies. Educational agencies such as research-and-development (R&D) centers and laboratories normally employ strategies focused on stimulating the widespread use of products they develop or that they are committed to diffusing. Product-centered strategies also are characteristic of the many projects established with funding from the federal government or private foundations to develop, test, and promote the

use of such products as new curricula, procedures such as nongrading or team teaching, or such instructional programs as Individually Prescribed Instruction (IPI) and open-classroom plans.

The consumer-centered approach most often reflects efforts by personnel of a school system to improve its instructional program. The initial impetus may come from within the system (as when achievement test results in reading or mathematics become known to staff members or to parents), or from outside (as when consultants from universities are called upon for recommendations or when state education department officials recommend changes).

Several advantages can be claimed for the consumer-centered over the product-centered approach. First, there is the likelihood that the product-centered approach will be dominated by salesmanship and will not be addressed to meeting crucial needs of the school district. Second, there is the danger that alternative products with superior qualities for meeting local needs may not be considered. Third is the likelihood that the criterion of success of the change strategy will be quantitative evidence on the adoption and continued use of the product in question rather than qualitative evidence in relation to meeting needs. A fourth likely disadvantage of the product-centered approach is a failure to involve local personnel sufficiently in planning and conducting the change program. A needs analysis is probably a sounder way of getting the commitment of local staff members to a change program. This way principals and teachers who will be most centrally involved in the change effort can become motivated to undertake whatever change activities seem appropriate to meet the needs they have shared in identifying.

Two advantages can be claimed for the product-centered approach. One is that the motivation of those promoting the product can stimulate a school district to undertake change activities that are apt to improve the

instructional program or supports to that program. The second is that those promoting the use of a product often offer expert assistance to local personnel in choosing a product, preparing to place it in operation, and installing it.

A strategy that incorporated the advantages of both consumer-centered and product-centered approaches could be expected to be superior to either taken alone. Thus, information about new products on the educational market might stimulate a school system to examine its needs as related to such products. The results of a needs analysis and a survey of available resources might lead to the choice of a particular product. At this time the interests of consumers and representatives would coincide and the two could cooperate in planning and conducting a change program using the product in question. The essence of this strategy, it should be noted, lies in the fact that the needs of the school system are focal, meaning that the consumer reference is primary, the product reference secondary.

Exercise 3 asks you to offer your criticism of the approach described to introducing a curriculum and your recommendations for a better change strategy.

EXERCISE 3 - WORKSHEET

Directions: A simulated account is given you of the process of introducing a new elementary science curriculum in a school district. The curriculum chosen is one of about a dozen new science curricula designed to serve the same purposes, each distributed by a different developer or publisher. You are asked to offer your criticism of the adoption process, then to recommend a better way of making changes in the elementary science program of the school district. When you finish the Worksheet, turn to the Answer Key for suggestions on improving your answer.

Illustration

Assume that the elementary curriculum coordinator for the Jefferson School District attended a convention where she visited the display of the Forward Publishing Company and was shown the outline and materials for the Inquiry Curriculum in Elementary Science. The coordinator was impressed with the curriculum and invited the publisher's salesman to visit Jefferson to exhibit the curriculum. Elementary building principals and the Assistant Superintendent for Instruction examined the curriculum and, after the salesman left, decided to propose its adoption to the Superintendent. The Superintendent approved the proposal and the curriculum was adopted.

Your criticism of this procedure

Your recommendations for a procedure

EXERCISE 3 - ANSWER KEY

Explanation: Below is given another person's answers to the two requirements of the exercise. Use these answers as a basis for checking your answers, recognizing that there is no one right set of answers.

A criticism of the procedure used by the Jefferson School District

Jefferson used a product-centered approach, rather than beginning with an analysis of needs for change in the local elementary science program.

Jefferson did not make comparison of the nature, merits, and costs of the Inquiry Curriculum with these features of competing new elementary science programs.

Jefferson did not involve the elementary teachers or their parents in the process of choosing a new science program.

There is no evidence that Jefferson carefully considered the feasibility of successful implementation of the new curriculum: costs, required changes in teachers' attitudes and training, suitability of the goals and materials for different students, etc.

Recommendations for an improved procedure

The curriculum coordinator should first bring together building principals and teacher representatives to examine the current instructional program in science to identify needs for change.

A task force composed of the curriculum coordinator, some building principals, and some teachers should next survey various new curricula, seeking the one that would best meet local needs as well as being feasible of implementation, taking account of funds available and needed teacher training.

Once a curriculum was selected through this process, district approval for adoption should be sought.

As part of the adoption process, a specific plan should be made for the adoption-implementation process.

Objective 6.	Outline the purposes and procedures of field testing, demonstration, information dissemination, and marketing in product diffusion strategies.

In product-centered change strategies, a number of subordinate strategies can be employed to promote the diffusion, that is the widespread utilization, of a product. It is convenient to specify and interrelate four of these subordinate strategies--field testing, demonstration, information dissemination, and marketing. Each serves different purposes in the diffusion of the use of a product; all four have a place in the diffusion process; and the order of their listing above can be defended as the most appropriate one.

Field testing refers to the process of trying a product in a number of types of educational settings for the purpose of making the necessary modifications of the product to make it suitable for varying use, to achieve effective implementation of the product in the different settings, and obtaining evidence on its use and effectiveness in these settings. If the purpose is to have the product used in different parts of the country, in school systems of different types of communities, and in various sorts of instructional programs, it is important for field testing to try the product in one or more school systems representing such differences. Field testing procedures following the above include identifying local settings representing the tryout situations desired; analyzing the requirements for introducing the product in those settings (including modifications needed in the product, procedures for use in planning the tryout, and procedures needed to introduce the product in the local setting; monitoring its implementation, and obtaining data on program implementation and outcomes in each location.)

Demonstration means exhibiting the product in use in one or more settings so that schools or school systems considering its adoption can observe it in action, interview participants about problems of implementation and

their general attitudes toward the product, and evaluate its outcomes. Generally, those interested in the possibility of adopting a product prefer to see it demonstrated in a situation similar to their own. For this reason, demonstrations should be conducted in as many different types of situation as is feasible with the resources available. Geographical distribution of demonstration sites is important to enable potential users of the product to afford visiting a demonstration site. Often, a field test site can also be used as a demonstration site once the field test phase has accomplished effective product implementation. An important function of a demonstration site is to provide internship settings for staff members from other schools or school systems that have decided to adopt the product.

Information dissemination about a product is always appropriate, but becomes especially justified when the product has been successfully field tested so that evidence of its effective implementation and outcomes in different types of situation has become available. Many information channels can be used to disseminate information about a product--trade publications, advertising brochures, advertisements in educational journals, and informal oral or written descriptions. The obligation assumed by anyone who disseminates such information is to give full and honest data about it; its purposes and features, requirements for implementing it (including costs), and its outcomes in different settings where tested. Especially valuable are reports by agencies that give impartial descriptions and comparisons of alternative products designed to serve the same purposes. An example of such an agency is Educational Products Information Service (EPIE) in New York City.

Marketing refers to procedures used in matching the consumer's needs with a given product. The strategy of marketing includes a mechanism for producing and distributing a product. Beyond this, it includes services to

adopting agencies in the form of expert advice on whether to select the product, on how to prepare to install it, and on placing it in operation. If marketing is nationwide, a network of regional offices often is required to provide the needed local information and assistance.

An important theoretical issue with regard to effective product diffusion concerns the difference between using as a criterion the number of adoptions of a product versus the number of effective adoptions. Effectiveness is defined in terms of appropriateness of the product to local needs, completeness of implementation, and evidence of significant and desirable outcomes. Associated with effective implementation are retention of the product in use over an extended period and spread in its use throughout the school system in cases where it was initially adopted on a pilot basis. It is obvious that effective adoption rather than number of adoptions should be the criterion. In general, especially in the long run, sound marketing practices depend on satisfying the consumer's needs rather than merely increasing the volume of sales.

The process of field testing, demonstration, information dissemination, and marketing outlined above has been standard procedure in the product development programs conducted during the last decade by Research and Development Centers and Regional Educational Laboratories funded under the Elementary and Secondary Education Act of 1965 with grants from the U. S. Office of Education and, most recently, the National Institute of Education. A similar procedure has been followed in numerous curriculum development projects funded by the National Science Foundation, private organizations such as the Carnegie Foundation, and other agencies.

It is important to note that such a product-centered approach is appropriate when a product is being developed. The critical thing is for the marketing process to give stress to local needs, that is, to become

consumer-centered. Disseminating information about the product widely is important to enable potential users to know of its features and availability. Given such information, it is up to local agencies to determine whether the product meets their needs and has advantages over competing products.

Objective 7. Compare pilot-test and total-system strategies for introducing change in a school district and give advantages and disadvantages for each.

Two contrasting strategies for introducing an innovation into a school system are the pilot-test and the total-system strategies. The pilot-test approach involves installation of a change program on a limited basis in segments of a school system, such as classes, grade levels, subject-matter areas, or schools. Thus the use of a new curriculum in elementary mathematics can be introduced on a pilot basis in one elementary school of a district, or a nongraded plan can be introduced in one or two schools and limited to the teaching of reading and mathematics. The total-system approach, on the other hand, involves a system-wide introduction of the change program from the beginning, without a prior pilot phase. For example, a school system might decide to introduce team teaching in all of its elementary schools as of a given date or it might decide to install a multi-phased, nongraded plan in all of its secondary schools, grades 7-12, as of a given date.

There are no available statistics on the proportion of local change programs in which the pilot-test or the total-system strategy is employed. Certainly the use of the pilot-test approach is very frequent and probably covers a high percentage of innovations introduced into school districts except where strong external pressures demand a system-wide initial change effort.

Pilot-test approaches rest on the assumption that a limited local test is a proper way of giving the total school system a good look at the innovation as a basis for deciding whether to widen its use. The pilot-test approach involves the use of limited resources, a fact that is especially important in those most-frequent circumstances where resources in money and personnel are in short supply. A pilot test enables the school district to initiate the use

of an innovation by staff members who desire to adopt it, thus ensuring a test by people with favorable attitudes toward the innovation and with high motivation to implement it. Since a pilot test requires a school district's commitment of lesser magnitude than a total-system program, it usually is easier to get support for it from school board, community, and staff. A failure of a pilot test is less catastrophic and less threatening to those responsible for it than a total-system project. A pilot-test has the further advantage of offering one or more demonstration-training sites in case the school district desires to consider a wider adoption of the program and, if the decision is made to spread the use of the program, a setting for training personnel to implement the program.

An important issue in the strategy of pilot testing has to do with the choice of sites for the pilot test. If sites are selected where the chances for the success of the program are optimal (because of characteristics of the parents, students, or staff members involved) there is the danger that critical problems of implementing the program in less-favorable sites will not be dealt with. The other limitation of choosing sites on this basis is that persons representing the staff or the community are apt to be skeptical about the use of the program in relatively unfavorable sites. A rule to follow in selecting pilot-test sites is to choose those that fairly represent the school system as a whole, insofar as this is possible.

Advantages of the total-system initiation of a change program result from the fact that it involves from the outset all those persons who, with a pilot-test approach, would later become involved with the program. Instead of the program being seen as the product and property of a small part of the school system (as in the pilot approach) it can be seen as belonging to the entire district. Thus, those "in" on a program from the outset see it as "our" program, not "theirs", and are more likely to unite in implementing it.

Objective 8. Describe authoritarian and participatory change strategies and give key strengths and weaknesses of each.

An authoritarian change strategy is one in which decisions to conduct a change program are made at an administrative level with little or no participation in the decision process by those lower in the school system hierarchy who will be involved in the program. A participatory change strategy is one in which decisions about a change program are made jointly by higher and lower levels of persons who will be involved in the program. An example of the authoritarian approach is when a school superintendent, after consultation with members of the system's administrative staff and school board, decides to install a nongraded plan for organizing the elementary schools in the district. An example of the participatory approach is when a building principal invites his teachers and parents to study a nongraded plan for organizing instruction and to decide with him whether to introduce it. In the planning and decision process for this approach, the principal would invite members of the district's central staff to join in, and might also extend an invitation to participate to the staffs of other elementary schools. Obviously change strategies might fall somewhere between a fully authoritarian approach and a fully participatory one. For example, the decision to conduct a change program might be made by a central administrator after consultation with the staff members who would be involved, and after those staff members had expressed the desire to take part in the program.

Advantages of the authoritarian approach relate mainly to efficiency in getting change underway. Thus, where speed is important, decisions at the administrative level can be made quickly while those involving a participatory approach normally require considerable time for study and negotiation. Also, where there is staff indifference or resistance to introducing change, the

authoritarian approach may be needed to get something done. Weaknesses of this type of strategy are that it runs the danger of resulting in a change program that does not suit the needs and resources of the schools where it is to be introduced, and that it is apt to obtain only an unwilling acceptance by its participants. Under such conditions, the program is likely to be implemented in form but not substance.

Advantages of the participatory strategy relate to the involvement of different categories of participants in the planning and decision process. This involvement may avoid the weaknesses of the authoritarian approach. Through study and discussion, prospective participants in the change program have good opportunities to arrive at one that is well suited to the needs and resources of the school where it will be conducted. Through sharing in decisions about the change program, participants are more apt to feel a personal identification with it and be motivated to make it succeed. Weaknesses of the participatory method relate to its inefficiency as compared to the authoritarian approach, and to the fact that efforts at reaching decisions representing the wishes of different categories of participants may result in no decision, or in a superficial change program departing hardly at all from prevailing practices.

Exercise 4 asks you to give your recommendations on who should participate in planning an approach to reducing violence in an integrated high school where racial clashes have been frequent.

EXERCISE 4 - WORKSHEET

Directions: This exercise asks you to assume that you are advising a school system on how to go about planning a solution to racial friction and violence in a recently integrated high school. When you have completed this Worksheet, turn to the Answer Key to compare your answer with another person's recommendations, realizing that there is no one right answer.

Rimstone High School has recently been changed from 99 per cent white to 60 per cent white, 33 per cent black, and 7 per cent Puerto Rican. A result has been constant friction in hallways and on playgrounds between whites and both blacks and Puerto Ricans, and a number of violent clashes that have brought in police to maintain order.

What are your recommendations for setting up a task force to work out a solution to these problems? Who should be on the task force, and who should be its chairperson?

EXERCISE 4 - ANSWER KEY

Explanation: The recommendations offered below are based on the assumption that the task force should be made up of representatives of those who are involved in or concerned about the racial problems at Rimstone High School, and that the task force should be led by the person most directly responsible for the school.

Recommended membership of the task force:

The principal

A teacher representing each of the three groups: white, black, Puerto Rican

A girl and a boy representing each of the three groups

A parent representing each of the three groups

A school board member

A guidance counselor

A member of the central administration of the school system

Recommended chairman of the task force:

The high school principal

Objective 9. Describe and compare the roles of external and internal change specialists and give key strengths and weaknesses of each.

In change strategies, the roles played by specialists in leadership for change are of major importance. A significant factor in the performance of such roles is whether the specialty is performed in a position held within a school system or outside it. An external change specialist holds a position outside a school system while an internal change specialist is a member of a school system's staff.

Change leadership within a school system may be provided by a member of the administrative staff--superintendent, associate or assistant superintendent, or building principal. Also it may be provided by a member of the system's staff of supervisors or specialists--curriculum coordinators or supervisors, school psychologists, project directors, or staff members of a research or evaluation center. In addition, change leadership often is held by teachers given special assignments such as that of team leader or project director.

External leadership for local educational change programs can come from staff members of state education departments, educational agencies such as federally-funded research-and-development centers and regional educational laboratories, or private educational consulting firms. Also, school districts can obtain consultants from university faculties to offer leadership for change.

With both internal and external leadership for change, the specialty in offering such leadership is very often a part-time role. Thus a school superintendent or building principal assumes such leadership as a part of his job. Only in the larger school districts is one apt to find consultants with full-time jobs in change leadership who are employed outside of school systems in state education departments, educational laboratories, private consulting

firms, or universities.

Whether the change specialist is internal or external to a school system, the responses of persons to the specialist depend to a considerable extent on whether they perceive him as having the power to make decisions affecting the school district. Within a school system, administrators are normally perceived as having such power, while specialists such as curriculum coordinators are normally perceived as lacking the direct authority to make decisions affecting staff members of the system. Outside the school system, representatives of state education departments are apt to be perceived as having decision-making powers because they represent the department's power to grant or withhold licenses or funds. Other external change specialists usually are perceived as lacking such decision-making powers. A consequence of such differences in authority is that persons low in a school system's power hierarchy are likely to participate in planning a change program more willingly and comfortably with a specialist who is perceived as a consultant or helper rather than an authority figure who has the power to command and to punish.

Ronald G. Havelock of the University of Michigan's Center for the Research Utilization of Scientific Knowledge (CRUSK) has prepared a list of general differences between internal and external agents for change, with the differences classified as advantages or disadvantages. The table below has been derived mainly from his analysis. (The volume from which the ideas in the table have been drawn is A Guide to Innovation in Education published in 1970 by CRUSK at the University of Michigan in Ann Arbor.)

	ADVANTAGES	DISADVANTAGES
INTERNAL CHANGE SPECIALIST	1. He knows the school system 2. He speaks the district's language 3. He understands the district norms 4. He identifies with the system's needs and aspirations 5. He is a familiar figure in the district	1. He may lack perspective 2. He may not have the special knowledge or skill required 3. He may not have an adequate power base 4. He may have to live down his past failures 5. He may not have independence of movement 6. He usually faces the difficult task of redefining his ongoing relationships with the other members of the system
EXTERNAL CHANGE SPECIALIST	1. He starts fresh 2. He is in a position to have perspective 3. He is independent 4. He is in a position to bring in something genuinely new	1. He is a stranger 2. He lacks the knowledge of the insider 3. He may not care enough

In order to make best use of the advantages of both positions and to avoid the problems of both, many experts in this field recommend that a change-agent team be made up of both internal and external persons working cooperatively. The members of such a team should then maximize the strengths of both internal and external positions while minimizing the weaknesses of each.

Objective 10. Outline the role of the resource linkage agent in educational change.

An important type of role in leadership for local educational change is that of providing school systems information about educational products (materials, procedures, programs) that could meet their needs for change. This type of role has received several names. Havelock's term is "resource linker," meaning that the role provides for linking the school's sytems needs with available resources for meeting those needs. Another term is "education information consultant." Yet another is "education extension agent." Finally, the role can be taken by "field consultants" representing state education departments, regional educational laboratories, universities, private consulting firms, or other agencies.

Whatever the role title, and whatever the agency employing personnel in this role, the functions performed are much the same. The job of a resource linker is to bring to the school district the best information available on resources that could meet the needs expressed in a request for information. Sometimes this job is performed by one person. More often, there is an agency employing two or more persons who share the linkage functions.

The linkage role can follow either a product-centered or a consumer-centered strategy of change. Thus the role of agricultural extension agent, from which the term education extension agent was derived, involves promoting the adoption of superior agricultural products and procedures by farmers. In this respect, the role is product-centered, even though the intent of the role is to foster improved agricultural practices, thereby benefiting both farmers and the general public. Some educational field consultants are product-centered since their role calls for promoting the adoption of particular educational products. However, most resource linkers in education are

consumer-centered, responding to expressed needs of client school systems.

Three main functions served by resource linkers should be distinguished. One function is helping school systems identify their needs for change. For example, a school district may appeal to an agency for information about individualized instructional programs at the elementary level. In responding to this request, it probably is desirable for the agency to discuss with representatives of the school system the particular purposes that the individualized approaches would serve and the resources the system has in hand for employing such approaches. The function this would accomplish is that of gaining more specific information on the sorts of resources that would meet the system's needs.

The second function is that of finding and communicating information about available resources for meeting the needs identified. Various agencies in education specialize in offering information about resources that match needs of school districts. A number of educational information centers exist across the country, often associated with state education departments. An example is Research and Information Services for Education (RISE) in Pennsylvania. The following page presents a description of this agency's work in providing information in response to requests from school districts. The Educational Products Information Exchange (EPIE) in New York City makes information available to school systems in the form of periodic published reports on different types of educational products. The ALERT information system of the Far West Laboratory for Educational Research and Development in San Francisco offers similar compilations of descriptive information about educational products.

The third function is that of helping school systems make effective use of the information provided them. Thus you will note that RISE offers, among

WHAT IS R.I.S.E. ?

Project R.I.S.E. is essentially an educational information center devoted to providing educational decision-makers with relevant information drawn from national, state, regional, and local resources in support of their problems and concerns. The project operates under the joint sponsorship of the Montgomery County Intermediate Unit and Bureau of Planning and Evaluation of the Pennsylvania Department of Education. It is currently engaged in the establishment of a state-wide educational information network.

SERVICES:

- Preparation and dissemination of research information reports (reviews of literature)
- Assistance in program development and evaluation
- Ready reference services
- Training and dissemination activities and information services
- Publication program including occasional papers, bibliographies, special reports and state-of-the-art papers on specific topics
- Computer and manual information retrieval from such national resources as the ERIC collection
- Dissemination of ESEA Title III activities
- Dissemination of promising educational practices
- Dissemination of other state sponsored R&D activity results such as those of the Educational Development Centers
- Dissemination of selected curriculum materials such as Learning Activity Packages.

R.I.S.E. INFORMATION RESOURCES

Project PURE

Pennsylvania Title III program reports

Educational Resources Information Center (ERIC)

Current Index to Journals in Education (CIJE)

300 current educational journals

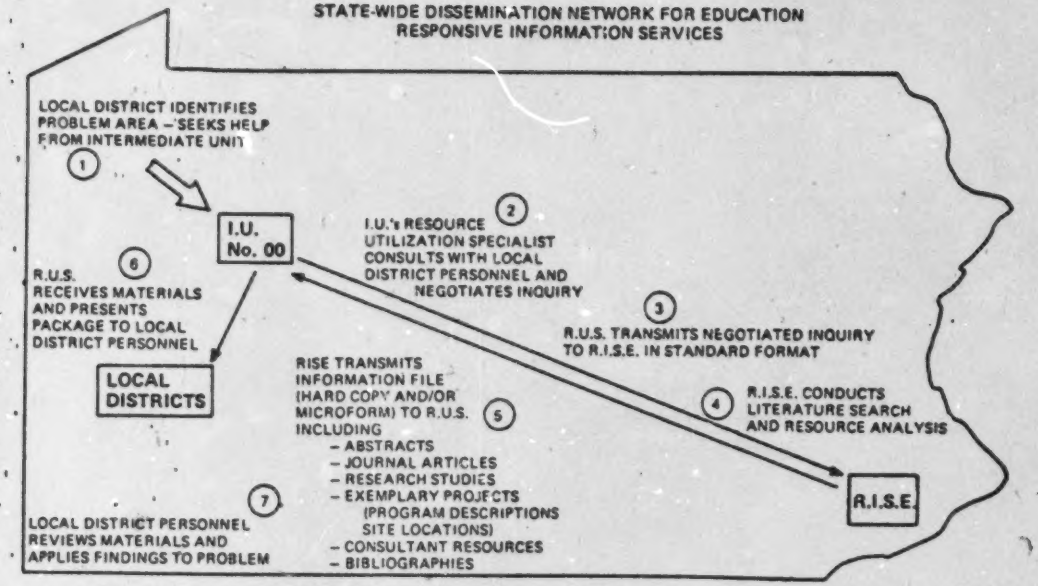
Selected Curriculum Materials

Products of the Regional Educational Labs

National index services

ERIC Clearinghouses

Cooperative agreements with other informational agencies such as Educational Testing Service and Educational Research Service


STATE-WIDE DISSEMINATION NETWORK FOR EDUCATION
RESPONSIVE INFORMATION SERVICES
LOCAL DISTRICT IDENTIFIES PROBLEM AREA – SEEKS HELP FROM INTERMEDIATE UNIT
1
I.U. No. 00
2
I.U.'s RESOURCE UTILIZATION SPECIALIST CONSULTS WITH LOCAL DISTRICT PERSONNEL AND NEGOTIATES INQUIRY
3
R.U.S. TRANSMITS NEGOTIATED INQUIRY TO R.I.S.E. IN STANDARD FORMAT
4
R.I.S.E. CONDUCTS LITERATURE SEARCH AND RESOURCE ANALYSIS
R.I.S.E.
5
RISE TRANSMITS INFORMATION FILE (HARD COPY AND/OR MICROFORM) TO R.U.S. INCLUDING
– ABSTRACTS
– JOURNAL ARTICLES
– RESEARCH STUDIES
– EXEMPLARY PROJECTS (PROGRAM DESCRIPTIONS SITE LOCATIONS)
– CONSULTANT RESOURCES
– BIBLIOGRAPHIES
6
R.U.S. RECEIVES MATERIALS AND PRESENTS PACKAGE TO LOCAL DISTRICT PERSONNEL
LOCAL DISTRICTS
7
LOCAL DISTRICT PERSONNEL REVIEWS MATERIALS AND APPLIES FINDINGS TO PROBLEM

R.I.S.E. LITERATURE SEARCH:

Perhaps the most important – and certainly the most visible – service is the preparation and dissemination of research information reports, that is, the end product of a literature search. Each search and each resulting report is individually tailored to the specific question asked by a specific client on a specific topic. It is thus in every sense a responsive service, geared to the client's needs. Trained searchers receive a search request, negotiate with the client to precisely define his requirements, and then undertake a search of all available resources to locate and retrieve material bearing directly on the question at issue. The result is a package of knowledge in the form of article or book print-outs, bibliographies, abstracts and other material. Searches may deal with, for instance, the structure of the middle school or the ungraded school or school student activism; the task is to come up with pertinent and reliable data concerning any question asked about any legitimate educational concern. The search process can be either manual or computer or both. Other forms of information dissemination include ready reference, selected dissemination packages, and duplicates of original searches. R.I.S.E. prefers to provide its products in microfiche format but hard copy is available at higher cost.

THE PENNSYLVANIA EDUCATIONAL INFORMATION NETWORK:

In an effort to make R.I.S.E. responsive information services available to all educators in the Commonwealth, a state-wide network has been established. Two-thirds of the Commonwealth's 29 Intermediate Units have a staff member trained by R.I.S.E. in the role of a Resource Utilization Specialist (RUS). The RUS functions as an intermediary between the local district personnel and information services available from R.I.S.E. Ideally, the network will operate in a two-way mode: (a) R.I.S.E. will acquire information from all elements of the educational system in the Commonwealth; (b) R.I.S.E. will provide responsive information to local districts and other agencies through the network. A secondary function of the network will be to provide an additional avenue for informal needs assessment activities at local, regional, and state levels. Future developments may include an expansion of the network to facilitate management information flow and other related systems. Local districts in non-participating Intermediate Units, as well as out-of-state agencies, may contract directly with R.I.S.E. for services.

other services, "assistance in program development and evaluation" and training of local staffs for implementing changes.

In case you wish to read further about the resource linker role in education, an excellent source is Training for Change Agents by Ronald and Mary Havelock (Ann Arbor, Michigan: Center for Research on Utilization of Scientific Knowledge, 1973).

Exercise 5 calls upon you to apply your understanding of the resource linker role by imagining yourself to be filling this role in responding to a school district's request for information about elementary team teaching plans.

EXERCISE 5 - WORKSHEET

Directions: Assume that you are a staff member of an education information center and that you have received a request from the Grand School District for information about elementary team teaching programs. Assume also that you are not experienced with team teaching. Outline below how you might proceed in dealing with this request under each of the three functions indicated. When you complete the Worksheet, turn to the Answer Key to compare your answers with those given there.

Function 1: Getting more specific data about the school system's needs.

What more would you want to know from the school district before proceeding?

How would you go about getting these specifics about the local needs?

Function 2: Gathering information about team teaching programs

What sorts of information would you seek?

Where would you turn for the information?

EXERCISE 5 - WORKSHEET (CONT.)

Function 3: Helping the school system make use of the information you provide.

How would you present the requested information to the school system?

What sorts of help would you offer the district in selecting and implementing team teaching?

EXERCISE 5 - ANSWER KEY

Explanation: The following are suggested answers for the exercise that you can use in checking and rounding out your answers. Obviously there is no one correct set of answers.

Function 1: Getting more specific data about the school district's needs

What more would you want to know from the school district before proceeding?

Information about who in the district is interested in team teaching

Information about what the district already knows about team teaching

Information about the number of schools, teachers, grades, etc. that the district is considering involving

Information about the school district's resources (personnel, money, etc.) that can be used in implementing team teaching

How would you go about getting these specifics about local needs?

Visit the school district to meet those persons most involved in the prospective introduction of team teaching

Arrange to meet with a district planning group (central administrators, building principals, teachers, parents, ??) to get as specific a picture as possible of just what the district wishes to achieve through team teaching, and just what resources it can employ in making the changes contemplated.

Function 2: Gathering information about team teaching plans

What sorts of information would you seek?

Descriptive information about various elementary team teaching programs

Data on where the programs have been introduced, particularly school systems in the same general geographic area as the Grand School District

Data on training programs that have been employed to prepare staff members to implement team teaching

Data on outcomes of team teaching programs: student learning, student satisfactions, teachers' attitudes, parents' attitudes, etc.

Where would you turn for the information?

The computerized files of the federal government's Education Resources Information Center (ERIC)

The Education Index

University professors in elementary education or administration

Educational laboratories known to have programs in team teaching

Books and journal articles describing team teaching programs

Function 3: Helping the school system make use of the information you provide

How would you present the requested information to the school system?

Offer a summary report of the various team teaching programs identified, including for each a description of the features, general requirements for implementing it, cost factors, and evidence on outcomes

Provide an analysis of the ways in which the different programs appear to match local needs and resources

Present an annotated bibliography for the district's use in studying the programs

Provide a list of key resource people who might be consulted for help in planning, implementing, and evaluating a local team teaching program

What sorts of help would you offer the district in selecting and implementing team teaching?

Offer to meet with the local planning team to help it make use of the information you provide

Offer help in setting up a staff training program for the program selected

Offer help in preparing an implementation strategy for installing the program

POST-ASSESSMENT EXERCISE - UNIT 6

Directions: This exercise is the same as the Pre-Assessment Exercise which you completed at the beginning of your study of this unit. Review your estimates of mastery of the items in the Pre-Assessment Exercise (page 9); you need to do only those items on the Post-Assessment Exercise which you judged you did not answer satisfactorily. Then check your answers with the Pre/Post Assessment Exercise - Answer Key.

Objective 1. Define theory in terms of variables and relationships among variables.

Objective 2. Define and distinguish hypotheses from principles or laws.

Objective 3. Describe how theory is related to practice in terms of explaining, predicting, and controlling what happens.

Objective 4. Define change strategy and explain how it relates to theory.

Objective 5. Describe and compare consumer-centered and product-centered change strategies.

Objective 6. Describe the following as aspects of introducing changes in schools: field testing, demonstration, information dissemination, and marketing.

Objective 7. Compare pilot-test and total-system strategies for introducing changes in a school district.

Objective 8. Describe authoritarian and participatory change strategies and give key strengths and weaknesses of each.

Objective 9. Describe the roles of external and internal change specialists and give key strengths and weaknesses of each.

Objective 10. Outline the role of the resource linkage agent in educational change.

PRE- AND POST-ASSESSMENT EXERCISE - ANSWER KEY

Explanation of Answer Key: Rather than giving complete answers to the questions in the Pre- or Post-Assessment Exercise, this Answer Key offers you a basis for judging your answers by indicating key points you should have included. Full answers to the questions will, of course, be found in the unit contents.

Obj. 1. Define theory in terms of variables and relationships among variables.

Theory is made up of statements about regular relationships between or among variables. Usually such statements are of cause-and-effect where causal or "independent" variables are distinguished from effect or "dependent" variables and where the direction of the relationship (positive, negative) between the variables is indicated.

Obj. 2. Define and distinguish hypotheses from principles or laws.

Hypotheses are statements of relationships that have not been proven true. Principles (rules, laws) are statements of relationships that have been proven to be generally true.

Obj. 3. Describe how theory is related to practice in terms of explaining, predicting, and controlling what happens.

Principles enable one to explain phenomena since they point to causal variables that account for them.

Principles also provide bases for predicting outcomes since, if causal factors are known to be in operation, one can predict that certain outcomes are likely to occur.

Knowing causal factors that tend to produce certain desired outcomes, if one can place these causal factors in operation, one can exert control over the outcomes desired.

Obj. 4. Define change strategy and explain how it relates to theory.

Change strategy refers to designing systematic plans for identifying and accomplishing desired changes.

Effective change strategies employ knowledge of principles related to change. Such principles identify causal factors that contribute to desired results.

Obj. 5. Describe and compare consumer-centered and product-centered change strategies.

Consumer-centered change strategies begin with identified local needs, proceed to examine various procedures or products that could meet these needs, then select and implement whatever seems best suited for meeting the needs.

Product-centered change strategies are based on the purpose of promoting the widespread use of a particular product rather than on the consumer's needs.

In comparing the two types of strategies, a key point to make is that the product-centered approach is apt to produce changes that are not best suited to local needs. Also, the consumer-centered approach usually has the advantage of higher local involvement in the whole process of choosing and implementing changes.

Obj. 6. Describe the following as aspects of introducing changes in schools: field testing, demonstration, information dissemination, and marketing.

In product-centered strategies, these terms refer to different aspects of the process of introducing a product in schools.

Field testing refers to trying the product in various types of school districts. This often means adapting the product to different settings, working out effective procedures for implementing it, and testing its suitability for use in the different types of districts.

Demonstration refers to implementing the product in one or more settings which potential users can visit to judge whether or not they wish to adopt the product.

Information dissemination refers to telling potential users about the product through any communication channels - advertising brochures, articles, workshop presentations, visits to schools, etc.

Marketing refers to the total process of promoting the use of a product including publication, advertising, training workshops, sales promotion, etc.

Obj. 7. Compare pilot-test and total-system strategies for introducing changes in a school district.

A pilot-test strategy introduces a change program on a limited basis within a school district as a means of solving local problems of implementation and as a means of judging its worth.

A total-system strategy involves introducing a change program in all the schools or classes in a school district for which it is appropriate.

An advantage of the total-system approach is that it can offer total-system participation from the beginning in selecting and planning to implement changes. Weaknesses can be that it spreads resources too thinly during the initial phases of the change process, and that it commits full-system resources to a change program that may prove to be undesirable.

Obj. 8. Describe authoritarian and participatory change strategies and give key strengths and weaknesses of each.

An authoritarian change strategy in school systems is one where administrative personnel decide upon a change program and call upon subordinates to accept and implement it.

A participatory change strategy is one where those who will be involved in conducting a change program take part in choosing it and in planning to implement it. The project task force, thus, might consist of representatives of the central administration, building principals, and teacher representatives. Parents and students also might be included.

The chief advantage of the authoritarian approach is that it may get things done in some districts where there is no basis of interest in change to make the participatory approach work.

The advantages of the participatory approach are that it often provides a better basis for selecting changes that meet local needs and is more apt to achieve the sort of involvement of participants that promotes successful implementation.

Obj. 9. Describe the roles of external and internal change specialists and give key strengths and weaknesses of each.

External change specialists hold jobs outside a school system. Examples are field consultants of state education departments, field personnel of regional educational labs, staff members of educational consulting firms, and university professors.

Internal change specialists are members of the school system staff who hold responsibility for leadership in change. Examples are the superintendent, the associate superintendent for instruction, curriculum coordinators, building principals, and teachers assigned leadership roles.

Internal specialists have the advantages of knowing the local situation and holding authority to initiate changes.

External specialists can be selected to offer expertness not represented on the school staff. Lacking authority to impose changes, they are apt to be seen as less threatening to some participants in a change program than internal specialists.

Obj. 10. Outline the role of the resource linkage agent in educational change.

The resource linkage agent is a person or agency outside the school system with the role of providing information about educational resources that can meet needs of the system.

The role of the linkage agent includes helping school districts specify their needs for change, locating resources suited to the needs, and communicating specific information about these resources. In addition, the role includes helping school districts make use of the information provided in selecting and implementing change programs.

Training for Leadership in Local
Educational Improvement Programs

UNIT EVALUATION FORM

Unit 2. Theory and Strategies of Planned Change in Education

Evaluation by_____ Date_____

Position_____ Organization_____

Please give your reactions to this unit by checking and writing in your opinions and recommendations. Returning this form to Research for Better Schools, 1700 Market St., Philadelphia, Pa. 19103 (Attention: Glen Heathers) will help us judge the value of the unit as well as aiding in its revision.

A. Your judgment on the importance of a unit on this topic as training for leadership in local educational improvement programs.

Check: Very High____ High____ Moderate____ Low____ Very Low____

Your comments:

B. Your judgment of the quality of the introductory section of the unit.

Check: Very High____ High____ Moderate____ Low____ Very Low____

Your comments:

C. Your judgment of the adequacy of the set of unit objectives.

Check: Very High____ High____ Moderate____ Low____ Very Low____

What objectives do you recommend omitting? Why?

What objectives do you recommend adding? Why?

Unit Evaluation Form - Con't.

D. Your judgment on the quality of the unit contents.
Check: Very High___ High___ Moderate___ Low___ Very Low___
Your comments:

E. Your judgment on the quality of the unit exercises.
Check: Very High___ High___ Moderate___ Low___ Very Low___
Your comments:

F. Your judgment on the quality of the unit pre- and post-assessments.
Check: Very High___ High___ Moderate___ Low___ Very Low___
Your comments:

G. About how many hours did you take to complete this unit?_____

H. How valuable do you judge this unit to be for training each of the following categories of educational leaders? Please enter the appropriate symbol.
H - Highly valuable. M - Moderately valuable. L - Low value

___ School system central administrators

___ Building principals

___ Curriculum coordinators

___ Field consultants of state education departments

___ Graduate students in administration or supervision

___ Other: